

REMARKS

The Applicants appreciate the Examiner's very quick and courteous Action.

Claims 1-9, 11, 13-14, 16-18, 20-27, 29, and 32 are pending in the application. Claims 12-14, 16-18, 20, 29 and 32 are rejected. Claims 1, 7, 9, 13, 14, 22, 25, 27, 29 and 32 are amended herein; no new matter has been added. Claims 10, 12, 15, 19, 28, 30-31 and 33 have been canceled.

The Examiner has allowed claims 1-9, 11 and 21-27, for which the Applicants are very appreciative. The Examiner also helpfully indicated that claims 19, 31 and 33 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Applicants are also greatly appreciative of this indication of allowability.

Independent claims 1, 7, 9, 14, 22, 25, 27, 29 and 32 have been amended herein to explicitly recite malic acid and lactic acid, at the risk of being redundant. Malic acid and lactic acid are simply different kinds of C₂-C₄ alpha-hydroxy acids, a term which is already recited in all of these claims. Malic acid is thus a C₄ di-acid with an alpha hydroxy group: (HOOCCH(OH)CH₂COOH). Malic acid is a C₄ alpha hydroxyl acid. It has a second acid group, but this does not change the total number of carbons and the general structure of the -OH group being alpha to at least one of the acid groups. Lactic acid has the structure CH₃CH(OH)COOH and is thus a C₃ alpha-hydroxy acid. Lactic acid is used in Examples 30 of Table III and Example 80 of Table VI. Thus, the Applicants respectfully submit that explicitly reciting these two C₂-C₄ alpha-hydroxy acids does not constitute improper insertions of new matter. These acids are already encompassed by the term "C₂-C₄ alpha-hydroxy acids" present in the claims, many of which have been allowed. These amendments raise no new issues and require no additional consideration or search.

The Applicants respectfully request reconsideration in view of the following remarks.

Rejection Under 35 U.S.C. §103 over Crump, et al.

The Examiner has again rejected composition claims 12-14, 16-18, 20, 29, and 32 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Pat. No. 5,389,594 to Crump, et al. for reasons of obviousness.

With respect to all but claim 20, the Examiner finds that Crump discloses chelants used in oil drilling that comprise one of citric acid, glyceric acid, gluconic acid, or glycollic acid, such chelants being useful in water. The oil/chelant mixture is contended by the Examiner to further comprise sulfuric acid to reduce the pH of the mixture to about 4.2. The amount of chelant in the wash water is seen by the Examiner to be about 0.01 to about 40 weight percent and corrosion inhibitors are included in the composition. See Crump, column 1, lines 16-27, column 11, lines 57-65, column 13, lines 22-29 and 57-64, column 14, lines 1-14, and column 16, lines 27-50. Presumably, the Examiner concludes that the rejected composition claims are obvious from these disclosures of Crump, et al.

With respect to claim 20, the Examiner finds that Crump, et al. does not disclose that the composition of the treated crude oil contains more than 10 ppm iron or calcium. However, the Examiner contends that it would have been obvious to one having ordinary skill in the art at the time of the invention to adjust the contact time, the amount of chelants added and to choose a crude oil feed having a high metals content in order to achieve a desired amount of metal content in the crude oil product.

In response to the Applicants' Amendment, the Examiner notes that Applicants' first argument is that Crump only very generally discloses the prior art chelants and that (supposedly) they may be useful in a long list of applications. Therefore, Applicant argues that the Crump reference does not teach that the chelants of the invention are used in oil drilling operations. However, the Examiner finds that Crump discloses that chelants in general and the chelants of the invention of Crump are useful in oil field operations (see Crump, column 1, lines 16-27 and column 5, lines 40-59). Therefore, the

Examiner contends that it would be obvious to use the chelants of citric acid, glyceric acid, gluconic acid, or glycollic acid in oil field operations, because Crump teaches that chelants are useful the treatment of crude oil.

Also, in response to Applicants' argument that the chelants of Crump, et al. are not disclosed as useful in refinery desalting processes, the Examiner finds a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claims.

The Applicants respectfully traverse.

To support an obviousness rejection, the Examiner has the initial burden of establishing a *prima facie* case of obviousness of the pending claims over the cited prior art, *In re Oeticker*, 977 F.2d 1443, 1445; 24 U.S.P.Q.2d 1443 (Fed. Cir. 1992).

The Applicants note that independent claim 12 has been canceled herein. Dependent claim 13, originally depending from claim 12, has been amended to depend from independent claim 9. No new matter has been added. Since the Examiner kindly allowed claim 9, the Applicants respectfully submit that amended claim 13 is now allowable for the same reason that claim 9 has been allowed.

The Applicants would further respectfully direct the Examiner's attention to the amendments to claim 14, where claim 14 has been amended to recite the language of dependent claim 19 (which has now been cancelled). Since the Examiner indicated that claim 19 was allowable if rewritten to include all of the limitations of the base claim (claim 14), the Applicants respectfully submit that this amendment to claim 14 achieves the same effect, and that amended claim 14 is now allowable for the same reason that the Examiner found claim 19 allowable. Thus, the Applicants respectfully submit that independent claim 14, and all claims dependent thereon, should be allowed.

The Applicants would further respectfully direct the Examiner's attention to the amendments to claim 29, where claim 29 has been amended to recite the language of dependent claim 31 (which has now been cancelled). Since the Examiner indicated that claim 31 was allowable if rewritten to include all of the limitations of the base claim (claim 29), the Applicants respectfully submit that this amendment to claim 29 achieves the same effect, and that amended claim 29 is now allowable for the same reason that the Examiner found claim 31 allowable. Thus, the Applicants respectfully submit that independent claim 29 should be allowed.

The Applicants would also respectfully direct the Examiner's attention to the amendments to claim 32, where claim 32 has been amended to recite the language of dependent claim 33 (which has now been cancelled). Since the Examiner indicated that claim 33 was allowable if rewritten to include all of the limitations of the base claim (claim 32), the Applicants respectfully submit that this amendment to claim 32 achieves the same effect, and that amended claim 32 is now allowable for the same reason that the Examiner found claim 33 allowable. Thus, the Applicants respectfully submit that independent claim 32 should be allowed.

The Applicants therefore respectfully submit that all claims present in the application are either now allowed or are allowable for reasons that the Examiner himself set out in the most recent Office Action. There being no further issues present, the Applicants respectfully submit that all claims should be allowed. Reconsideration is respectfully requested.

It is respectfully submitted that the amendments and arguments presented above overcome the rejection. Reconsideration and allowance of the claims are respectfully requested. The Examiner is respectfully reminded of his duty to indicate allowable subject matter. The Examiner is invited to call the Applicants'

attorney at the number below for any reason, especially any reason that may help advance the prosecution.

Respectfully submitted,
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